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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/904,312	07/12/2001	Sonja Eijsbouts	ACH2807US	1803

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EXAMINER

LISH, PETER J

ART UNIT

PAPER NUMBER

1754

DATE MAILED: 06/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/904,312

Applicant(s)

EIJSBOUTS, SONJA

Examiner

Peter J Lish

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-14 and 16-25 is/are pending in the application.
- 4a) Of the above claim(s) 16-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-14 and 25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION*****Response to Arguments***

Applicant's arguments filed 3/22/04 have been fully considered but they are not persuasive. Applicants argue that a specific embodiment showing the portion of the taught range which overlaps with the applicant's claimed range is required, as supported by Ex parte Thumm. Applicant holds that, "although two ranges might overlap to a certain extent, such circumstance does not preclude the grant of a patent when the applicant satisfactorily establishes that he obtains results which are unobvious and unexpected and that his claims do not read upon a particular embodiment of the reference." However, applicant has not established results which are unobvious and unexpected. Examiner again points out that an explicit example is not required in order for a reference to meet the limitation of a claim.

Applicant additionally argues that the newly amended language, "inert under hydroprocessing conditions" overcomes the previously applied rejection over JP '898. It is first noted that any catalyst support which is used for hydroprocessing is expected to be inert under the reaction conditions, in order to maintain the catalyst structure. Additionally, the applicant appears to argue that this limitation requires that the binder have a carbon content of greater than 50%. If applicant would like to argue this limitation (a carbon content of greater than 50%), then it is suggested that this language be used in the claim. This interpretation has been considered.

Applicant additionally argues that the newly amended language, "having a side crushing strength of at least 1 lbs/mm" overcomes the previously applied rejection over JP '898 because JP '898 recites the use of "a comparatively soft, inflammable support". However, applicants teach that the side crushing strength of the applicant flows from their use of a combustible

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binder. It is therefore expected that because no difference is seen between the combustible binders of JP '898 and those of the instantly claimed invention, the catalysts of JP '898 will meet this property limitation. Where, as here, the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the burden of proof is shifted to the applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product. See *In re Best*, 195 USPQ 430.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The limitation of a side crushing strength is indefinite because the units for this property should be in force per area, i.e. lbs/mm<sup>2</sup>. Additionally, it is unclear as to the difference between a "side" crushing property and any other crushing property.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1, 4-14, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 07-289898.

JP '898 teaches using an inflammable carbonaceous material as a support for a catalyst. Paragraph 21 teaches that after combustion the support comprises carbon as its major component. Paragraphs 37 and 38 teach that two Group VIA metals and a group VIII metal are supported for use in various hydrogenation reactions. Paragraph 37 also teaches that molybdenum and tungsten are most desirable as the Group VIA metals. Paragraph 56 teaches that hydrogen sulfide may be used to activate the catalyst or for preliminary sulfuration. Paragraph 44 also teaches the active metals in the catalyst in sulfide form. Paragraph 40 teaches that the various metal components may comprise up to 30% Group VIA metal and up to 50% Group VIII metal, totaling 80 wt. % of the combined metals. The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range of temperatures disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, in re Malagari, 182 USPQ 549. A cellulose system or a coal containing less than or equal to 65 wt% carbon as the support, as well as a combination of the two, is taught. The preferred carbon content of the coal is between 30 and 65 wt%.

While it is not explicitly taught that the catalyst be inert under hydroprocessing conditions, it is expected that this be the case because carbon content of the support, or binder, above 50% is taught. It is not explicitly taught that the catalysts have a side crushing strength of at least 1 lbs/mm, however, applicants teach that the side crushing strength of the applicant flows from their use of a combustible binder. It is therefore expected that because no difference is seen

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between the combustible binders of JP '898 and those of the instantly claimed invention, the catalysts of JP '898 will meet this property limitation.

Claims 1, 3-14, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soled et al. (US 6,162,350).

Soled et al. teaches a catalyst for hydroprocessing that contains at least one of the Group VIII metals and at least one of the Group VIB metals. The preferred composition contains nickel, tungsten, and molybdenum. The catalysts are present in an amount of between 30 and 100 %wt., preferably between 70 and 100 %wt., calculated as oxides and based on the total weight of the catalyst particles. It is also taught that the metals are present either as oxides or as sulfides.

Various additives, including binders and additives to facilitate shaping, may also be contained in the catalyst. Graphite is listed as an additive used to facilitate shaping. While the amount of shaping additive to be used is not explicitly taught, it would have been obvious to one of ordinary skill at the time of invention to add a graphite shaping agent in an amount of greater than 1 %wt, based on the total weight of the catalyst particles, in order to facilitate shaping of the catalyst particles.

While it is not explicitly taught that the catalyst of Soled et al. be inert under hydroprocessing conditions, it is expected that this be the case because the catalyst of Soled et al. is used for hydroprocessing and because no difference is seen between the catalyst particles of Soled et al. and those of the instantly claimed invention. It is not explicitly taught that the catalysts have a side crushing strength of at least 1 lbs/mm, however, is expected that this be the

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case because no difference is seen between the catalyst particles of Soled et al. and those of the instantly claimed invention.

Claims 1, 3-14, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soled et al. (US 6,162,350) in view of Sudhakar et al. (US 5,525,211).

Soled et al. teaches a catalyst for hydroprocessing that contains at least one of the Group VIII metals and at least one of the Group VIB metals. The preferred composition contains nickel, tungsten, and molybdenum. The catalysts are present in an amount of between 30 and 100 %wt., preferably between 70 and 100 %wt., calculated as oxides and based on the total weight of the catalyst particles. It is also taught that the metals are present either as oxides or as sulfides.

Various additives, including binders and additives to facilitate shaping, may also be contained in the catalyst. It is taught that the binder may be chosen from those conventionally applied as binders in hydroprocessing catalysts. While Soled et al. does not explicitly teach the use of carbon as a conventional binder, Sudhakar et al. teaches the use of carbon or graphite as binders in hydroprocessing catalysts (paragraph spanning columns 3 and 4). Therefore, it would have been obvious to one of ordinary skill at the time of invention to use a carbon or graphite binder material, as taught by Sudhakar et al., in the catalyst of Soled et al. because it achieves the desired effect and meets the conditions of being a conventionally used binder for hydroprocessing catalysts. Soled teaches the amount of binder may be between 0.5 and 75 %wt., based on the total weight of the catalyst particles.

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While it is not explicitly taught that the catalyst of Soled et al. be inert under hydroprocessing conditions, it is expected that this be the case because the catalyst of Soled et al. is used for hydroprocessing and because no difference is seen between the catalyst particles of Soled et al. in view of Sudhakar et al. and those of the instantly claimed invention. It is not explicitly taught that the catalysts have a side crushing strength of at least 1 lbs/mm, however, is expected that this be the case because no difference is seen between the catalyst particles of Soled et al. in view of Sudhakar et al. and those of the instantly claimed invention.

Claims 1, 3-14, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soled et al. (US 6,162,350) in view of Sudhakar et al. (US 5,851,382).

Soled et al. teaches a catalyst for hydroprocessing that contains at least one of the Group VIII metals and at least one of the Group VIB metals. The preferred composition contains nickel, tungsten, and molybdenum. The catalysts are present in an amount of between 30 and 100 %wt., preferably between 70 and 100 %wt., calculated as oxides and based on the total weight of the catalyst particles. It is also taught that the metals are present either as oxides or as sulfides.

Various additives, including binders and additives to facilitate shaping, may also be contained in the catalyst. It is taught that the binder may be chosen from those conventionally applied as binders in hydroprocessing catalysts. While Soled et al. does not explicitly teach the use of carbon as a conventional binder, Sudhakar et al. teaches the use of carbon black as a binder in hydroprocessing catalysts (paragraph spanning columns 3 and 4). Therefore, it would have been obvious to one of ordinary skill at the time of invention to use carbon black as a

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binder material, as taught by Sudhakar et al., in the catalyst of Soled et al. because it achieves the desired effect and meets the conditions of being a conventionally used binder for hydroprocessing catalysts. Soled teaches the amount of binder may be between 0.5 and 75 %wt., based on the total weight of the catalyst particles.

While it is not explicitly taught that the catalyst of Soled et al. be inert under hydroprocessing conditions, it is expected that this be the case because the catalyst of Soled et al. is used for hydroprocessing and because no difference is seen between the catalyst particles of Soled et al. in view of Sudhakar et al. and those of the instantly claimed invention. It is not explicitly taught that the catalysts have a side crushing strength of at least 1 lbs/mm, however, is expected that this be the case because no difference is seen between the catalyst particles of Soled et al. in view of Sudhakar et al. and those of the instantly claimed invention.

### ***Conclusion***

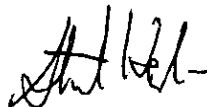
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Lish whose telephone number is 571-272-1354. The examiner can normally be reached on 9:00-6:00 Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PL



STUART L. HENDRICKSON  
PRIMARY EXAMINER